

# ROBERT GUILD

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BY ELECTRONIC FILING AND SERVICE

February 11, 2019

Heather Shirley Smith, Esquire  
Deputy General Counsel  
Duke Energy  
40 W. Broad Street, Suite 690  
Greenville, SC 29601

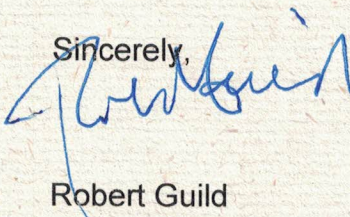
In re: Application of Duke Energy Carolinas, LLC for Adjustments in Electric Rate  
Schedules and Tariffs and Request for an Accounting Order  
Docket No. 2018-319--E

Dear Ms. Smith:

Enclosed please find for your consideration in the above docket Sierra Club's First Set of Data Requests which is being served upon you electronically this date. In light of the schedule in this matter we ask that your responses be provided to us within ten (10) days, or as soon as the requested information can be made available. Should you have any questions about these requests please do not hesitate to call me.

With kind regards I am

Sincerely,



Robert Guild

Encl.s

CC: PSC Clerk





**BEFORE**  
**THE PUBLIC SERVICE COMMISSION OF**  
**SOUTH CAROLINA**  
**DOCKET NO. 2018-319-E**

In re: Application of Duke Energy Carolinas, LLC for Adjustments in Electric Rate Schedules and Tariffs and Request for an Accounting Order

**SIERRA CLUB'S FIRST SET OF  
DATA REQUESTS  
FEBRUARY 11, 2019**

Intervenor Sierra Club, by and through undersigned counsel, serves the following discovery requests on Duke Energy Carolinas, LLC (“DEC” or the “Company”) in the above-referenced docket. These requests are continuing in nature to the extent permitted by the rules of the South Carolina Public Service Commission and the South Carolina Rules of Civil Procedure.

**DEFINITIONS**

In addition to the terms defined elsewhere, the following terms shall have the following meanings:

A. “Communications” shall mean all oral communications and all written communications, including all “documents,” as defined below.

B. “Filing” means the application, together with the direct testimony and exhibits attached thereto, filed by DEC in this docket on June 1, 2017, together with any amendments to the application filed thereafter.

C. “Document” and “documents” shall mean all written, recorded or graphic matters whatsoever and all non-identical copies thereof, including but not limited to papers, books, records, letters, photographs, correspondence, communications, emails, telegrams, cables, telex messages, memoranda, notes, notations, work papers, transcripts, minutes, reports, recordings of telephone or other conversations, statements, summaries, opinions, studies, analyses, evaluations, contracts, agreements, jotting, agendas, bulletins, notices, announcements, advertisements, guidelines, charts, manuals, brochures, publications, schedules, price lists, subscription lists, customer lists, journals, statistical reports, desk calendars, appointment books, diaries, lists, tabulations, newsletters, drafts, proofs, galleys, or other prepublication forms of materials, telephone lists or indexes, Rolodexes, computer printouts, data processing program libraries, data

processing inputs and outputs, microfilm, microfiches, CD ROMs, books of account, records or invoices reflecting business operations, all records kept by electronic, photographic or mechanical means, any notes or drafts relating to any of the foregoing, and any other documents of any kind in your possession, custody or control or to which you have access or known to exist.

D. "Identify" or "identity" as used with respect to a person means to state the person's full name and present address and his present or last known employment position and business affiliation if a natural person, and corporate or other status and address if not a natural person. "Identify" or "identity" when used in reference to a document means to state the following as to each document:

- (a) Its nature and contents;
- (b) Its date;
- (c) The date it was executed if different from the date it bears;
- (d) The name, address and position of its author or signer;
- (e) The name, address and position of its addressee, if any;
- (f) Its present location and the name, present address and position of the person or persons having present custody; and
- (g) Whether it has been destroyed, and if so, with regard to such destruction; (i) the date of destruction; (ii) the reason for destruction; and (iii) the identity of the person who destroyed the document.

E. "Person" includes any individual, sole proprietorship, partnership, corporation, association, trust, statutory trust, joint venture, or other entity.

F. "You" or "your" means DEC and its agents, employees, representatives, attorneys, experts, investigators, insurers, consultants, or anyone acting on behalf of DEC.

### INSTRUCTIONS

You are required to produce all designated documents in your possession, custody, or control and permit Sierra Club to inspect and copy the documents described below which are in your possession. You are requested to produce these documents at the offices of Sierra Club's local counsel, Robert Guild, 314 Pall Mall Street, Columbia, SC 29201, or at such other place to which the parties shall agree in writing, within 10 days of the service date of these requests or as otherwise agreed by the parties in writing.

Produced documents should include originals and all other copies which are not absolutely identical as well as all drafts and notes (whether typed, handwritten or otherwise) made or prepared in connection with such documents, whether used or not.

If you consider any document to be privileged or protected from production, then you must: (i) include in your response a list of documents withheld from production, (ii) identify each document by date, addressee, author, title and subject matter, (iii) identify those persons who have seen the document or who were sent copies, and (iv) state the ground(s) upon which each such document is considered privileged or protected.



## DATA REQUESTS

1. Please provide copies of all responses to data requests or formal discovery requests by all other parties in the above-referenced docket. Please consider this an ongoing request.
2. Reference Kerin Direct Testimony, page 8, lines 19–21: Witness Kerin testifies that “the Company is adding dry fly ash, bottom ash, and FGD blowdown handling systems to operating coal-fired plants that are not already so equipped.” Witness Kerin further testifies that “the Company is converting to full dry ash handling at all operating plants as required by those requirements and as the only viable alternative to plant closure” (page 19, lines 19–21). For each of the Company’s coal-fired plants, please indicate whether retirement analyses were conducted to determine whether continued operation of the plants and the addition of dry fly ash, bottom, ash, and FGD blowdown handling systems was the most economic option.
  - a. If yes, please provide the analysis.
  - b. If no, why not?
3. Please identify costs incurred to date by the Company in connection with the addition of dry fly ash handling systems at its coal-fired coal plants.
4. Please provide all documents relating to the addition of dry fly ash handling systems at the Company’s coal-fired plants.
5. Please identify costs incurred to date by the Company in connection with the addition of dry bottom ash handling systems at its coal-fired coal plants.
6. Please provide all documents relating to the addition of dry bottom ash handling systems at the Company’s coal-fired plants.
7. Please identify costs incurred to date by the Company in connection with the addition of dry FGD blowdown handling systems at its coal-fired coal plants.
8. Please provide all documents relating to the addition of dry FGD blowdown handling systems at the Company’s coal-fired plants.
9. Please identify costs incurred to date by the Company in connection with the addition of new waste water treatment systems or upgrades at existing systems at its coal-fired plants.
10. Please provide all documents relating to the addition of new waste water treatment systems or upgrades at existing systems at its coal-fired plants.
11. Please identify costs incurred to date by the Company in connection with the construction of landfills at the Company’s coal-fired plants.

12. Please provide all documents relating to construction of landfills at the Company's coal-fired plants.
13. Please identify the volume of coal combustion residuals that the Company expects to generate each year at each of its coal-fired plants between now and the date of plant retirement.
14. Please explain the Company's plans for management and disposal of coal combustion residuals generated at its coal-fired plants after December 31, 2018, including cost estimates for management and disposal of coal combustion residuals.
15. In preparing closure plans coal ash disposal units at its coal-fired plants, did the Company conduct any analysis of how early retirement of the plants could change the closure plans?
  - a. If yes, please provide the analysis.
  - b. If no, why not?
16. Reference Miller Direct Testimony at page 14, lines 5–7. Witness Miller testifies that “DE Carolinas plans to invest approximately \$1 billion in its Fossil/Hydro/Solar fleet during the period 2019- 2021.” Please identify and provide documentation of planned capital investments for the Company's coal-fired plants.
17. Reference Miller Direct Testimony, page 7, lines 7–9: Witness Miller testifies about “updates” to “probable retirement dates for several fossil plants to better align with the industry information for supercritical and subcritical coal units and assumptions for future environmental regulations.” Please identify the “industry information” and “assumptions” upon which the Company relied.
18. Please provide any and all analyses relating to the retirement of the Company's coal-fired plants.
19. Reference Doss Direct Testimony at page 9, line 8–9. Witness Doss's testimony refers to “updated probable generation plant retirement dates.” How does the Company determine “probable generation plant retirement dates” for coal-fired generation plants?
20. Please provide any documents relating to the determination of “probable generation plant retirement dates” for the Company's coal-fired generation plants.
21. Reference Doss Direct Testimony at page 9, lines 18–21. Witness Doss testifies that “The probable retirement dates were updated primarily to align dates with current licenses, industry standards, or operational plans due to aging technology, assumptions for future environmental regulations, or new planned generation.”
  - a. Please identify and provide documentation of those licenses referenced that pertain to the Company's coal-fired plants.
  - b. Please identify and provide documentation of those industry standards referenced that pertain to the Company's coal-fired plants.



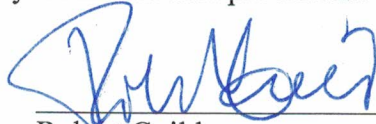
- c. Please identify and provide documentation of those operational plans referenced that pertain to the Company's coal-fired plants.
  - d. Please identify and provide documentation of those assumptions for future environmental regulations referenced that pertain to the Company's coal-fired plants.
  - e. Please identify and provide documentation of any new planned generation the construction and operation of which is related to the retirement dates for the Company's coal-fired plants.
22. Reference Exhibit 2 (2016 Depreciation Study) to Doss Direct Testimony. The 2016 Depreciation Study identifies the "Depreciable Life Date" for the Company's coal-fired units.
- a. How was "Depreciable Life Date" determined for each of those units?
  - b. Please provide any workpapers or other supporting documentation of those depreciable life date determinations.
23. Regarding the production cost and capacity expansion modeling described in Appendix A to the Company's 2018 Integrated Resource Plan ("IRP"):
- a. Please provide all of the input and output files for all modeling results presented.
  - b. Please provide workbooks used to process modeling outputs, including (but not limited to) comparisons of net present value revenue requirements.
  - c. Please provide workbooks used in developing model inputs.
  - d. Did the Company let System Optimizer optimize resource selection?
    - i. If not, please explain why not.
    - ii. If so, how was this optimization incorporated into the portfolios run?
  - e. Did the Company model other portfolios besides the seven portfolios provided in the IRP?
  - f. If so, please describe those portfolios and provide the related inputs and outputs.
24. Please provide the following for each portfolio and scenario and for each year modeled:
- a. Generation by unit
  - b. Capacity by unit
  - c. Fuel costs by unit
  - d. Fuel usage by unit
  - e. Heat rate by unit
  - f. Non-fuel variables O&M costs by unit
  - g. Fixed O&M costs by unit
  - h. Environmental capital costs by unit
  - i. Non-environmental capital costs by unit
  - j. Forced outage rate by unit
  - k. Planned outage rate by unit
  - l. Equivalent Availability Factors by unit
  - m. Percentage economic dispatch (monthly) by unit

25. Please provide the workpapers for the development of the portfolios described in Appendix A to the Company's 2018 IRP, including sensitivity runs whether or not those sensitivities are discussed in the 2018 IRP.
26. Please provide the files and workpapers used to calculate the present value of revenue requirements for each portfolio, over the range of scenarios and sensitivities, as described in Appendix A to the Company's 2018 IRP.
27. In its modeling, did the Company allow the model to select retirements of existing coal units on an economic basis?
  - a. If not, please explain why not.
  - b. If not, please describe model(s) settings used to prevent the model(s) selecting retirement of these units.
28. Regarding the screening of resource options described in Appendix A to the Company's 2018 IRP:
  - a. Please identify factors that were used to screen new generation resources.
  - b. Please identify each type of new generation resource that was eliminated from modeling through this screening process.
  - c. For each generation resource that was eliminated from modeling through this screening process, please identify and explain the factors causing elimination.
29. Please provide the workpapers for the screening analysis of supply-side options described in Appendix A to the Company's 2018 IRP.
30. For each of the Company's coal units, please provide the following annual information for each of the years 2010 through 2018:
  - a. Summer capacity rating
  - b. Forced outage rate
  - c. Planned outage rate
  - d. Equivalent Availability Factor (EAF)
  - e. Generation
  - f. Fixed O&M costs
  - g. Non-fuel variable O&M costs
  - h. Fuel costs by type
  - i. Fuel usage (MMBtu) by type
  - j. Environmental capital costs
  - k. Non-environmental capital costs
31. For each of the Company's coal units, please provide the most recent forecast of the following for each unit and by year:
  - a. Summer capacity rating
  - b. Forced outage rate
  - c. Planned outage rate
  - d. Equivalent Availability Factor (EAF)
  - e. Generation

- f. Fixed O&M costs
  - g. Non-fuel variable O&M costs
  - h. Fuel costs by type
  - i. Fuel usage (MMBtu) by type
  - j. Environmental capital costs
  - k. Non-environmental capital costs
32. For each of the Company's coal units, please provide the following information as of December 31 for each of the years 2010 through 2018:
- a. Gross plant balance
  - b. Accumulated depreciation balance
  - c. Net plant balance
  - d. Net salvage (or negative net salvage)
  - e. The identification and quantification of any other category of expense collected through depreciation expense (e.g. asset retirement obligations, remediation accounts, etc.)
  - f. Estimated end-of-useful life date for purposes of setting a depreciation schedule
  - g. The then-applicable annual depreciation expense attributable to the generating unit (to the extent applicable)
  - h. To the extent that any of the values in (a)– (g) are quantified differently in base rates and any applicable rate riders, please include both amounts.
33. Please provide each forecast produced by or for the Company for the years 2013 through present (latest available) regarding:
- a. Peak load
  - b. Energy requirement
  - c. Capacity position (surplus/deficit)
  - d. Wholesale energy market prices
  - e. Coal prices
  - f. Natural gas prices
  - g. For (a)-(f), provide the date each forecast was produced.
34. Please provide each forecast reviewed by the Company developed in 2013 through present (latest available) regarding:
- a. Wholesale energy market prices
  - b. Coal prices
  - c. Natural gas prices
  - d. For (a)-(c), provide dates that these forecasts were reviewed—preferably the day, if not the month.
35. Please identify and produce each and any analysis carried out since 2013 comparing the cost of continued operation of each of the Company's existing coal units (or combinations of units) with retiring and replacing the unit(s)' energy and capacity with alternatives.



36. For each analysis identified in response to request above, please produce any workpapers, modeling input and output files, or other documents used in carrying out such analysis.
37. Please state whether the Company has examined the impact on capacity adequacy, transmission grid support, voltage support, or other reliability measures if the Company were to retire or idle any of its existing coal units.
- a. If so, identify and produce any analyses, studies, or other documents regarding any such impact, the cost of remediating that impact, and how long it would take to remediate that impact.
  - b. If not, explain why not and identify any studies or analyses that the Company believes would be needed to identify such impacts.
38. For each of the Company's coal units, please provide the following information:
- a. Identify the currently applicable coal fuel supply contract(s), including the supplier for such contracts.
  - b. Identify the term of any currently applicable coal fuel supply contract (i.e. length of the contract until expiration or option to renew).
39. Please describe the process the Company relies on to coordinate setting the expected end-of-life date for depreciation purposes with any coal fuel contract provisions, including but not limited to contract terms and any minimum take provisions.



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Columbia, SC 29201  
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bguild@mindspring.com

**BEFORE  
THE PUBLIC SERVICE COMMISSION OF  
SOUTH CAROLINA  
DOCKET NO. 2018-319-E**

In re: Application of Duke Energy Carolinas, LLC for Adjustments in Electric Rate Schedules and Tariffs and Request for an Accounting Order

**CERTIFICATE OF SERVICE**

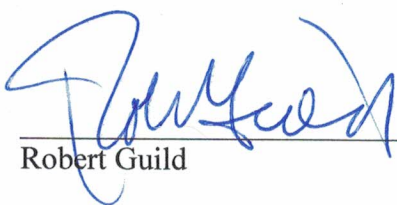
I hereby certify that I have served the persons listed below, a copy of the Sierra Club's First Set of Data Requests via electronic mail on this day, February 11, 2019.

**Heather Shirley Smith,**  
heather.smith@duke-energy.com

**John Burnett,** john.burnett@duke-energy.com

**Molly McIntosh Jagannathan,** molly.jagannathan@troutman.com

**Frank R. Ellerbe III,** fellerbe@robinsongray

  
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Robert Guild